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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/760,482

01/21/2004

Shoji Katsuragawa

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EXAMINER

SHAH, MILAP

ART UNIT

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3714

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/760,482	Applicant(s) KATSURAGAWA ET AL.	
	Examiner Milap Shah	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 6, 2007 has been entered.

The Examiner acknowledges that claims 1-3, 7, & 12 were amended, claims 5 & 6 were canceled, and no new claims were added. Therefore, claims 1-4 & 7-17 are currently pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 & 7-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Akisada et al. (U.S. Patent No. 5,687,307, hereafter “Akisada”).

Claims 1, 3, 7, & 12: Akisada discloses the same invention including a program, display method, or system for projecting a predetermined image on a character of a game (i.e. character may be considered any object in the game) in a game machine having an operation unit (figure 1[display unit 8], a calculation processing unit (figure 1[arithmetic and logic unit 6], and a control unit (figure [controller 1]) connected to operation and calculation processing units. Akisada discloses the program, method, or system to comprise of an image

creation process, which creates an image consisting of a two-dimensional coordinates (figure 8 – the 2D image of the “M” symbol must have been created through an image creation processor), and a pasting process which arranges the created image and a virtual light source (i.e. the virtual light source is considered the virtual viewpoint source, as in, where the projection is oriented from, such as in figure 8, point P) for projecting the image onto a character at an arbitrary position in the vicinity of the character in a 3D virtual space (figure 8), based on an input signal from the operation unit, and for pasting on the character a projected image created by projecting the image onto the character from the projection source (figure 8, where the projection source is point P and the projected image is the “M” symbol; see also column 9, lines 38-64), wherein the pasting process pastes on the character the projected image such that the projected image projected on a projection plane closest to a viewpoint remains after the character is pasted on all the projected plane on which the projected image is projected by the projecting processing using a light matrix, view matrix, and a projection matrix, and the pasting process creates the view matrix using the light matrix and the projection matrix (figures 11A & 11B clearly show the viewpoint of the projection image remains even when viewed from various angles, where the light matrix, view matrix, and projection matrix are respectively the virtual light source at point P which determines where shadowing is needed, point P from where the projection begins, and the plane defined by rectangle HGFC from where the object is mapped; see also response to arguments below).

Regarding claim 3, the gaming machine is the computer graphics apparatus as disclosed in figure 1 and described above, where the gaming machine performs is considered to perform the same process as described above.

Regarding claim 7, from the above disclosure and explanation of Akisada, the specific steps correspond to the structure of claim 1 that would perform said steps, such as the image creation process would be creating predetermined projection image data as recited in claim 7. Similarly, arranging the object and the projection image and determining the relative position of the projection image and the virtual light source for projecting the projection image onto the object, are processes that are described above. Additionally, Akisada inherently discloses calculating the distance between the virtual light source and a projection plane containing the projection position on the object, and calculating the projection plane of the object, onto which the projection image is projected, removing from the projection image on a projection plane beyond a predetermined distance from the virtual light source (see at least figures 3, 4, & 8, column 5, line 17 – column 7, line 29, and column 9, lines 38-64). Lastly, Akisada also discloses projecting the projection image onto the projection plane with the virtual light source as a viewpoint, and pasting the projection image to the projection plane of the object and creating object image data for the object to which the projection image is pasted (clear in at least figures 3, 4, & 8).

Regarding claim 12, all of the above applies, additionally, the only apparent difference between claims 7 & 12 seems to be that each pixel of the projection image is viewed separately such that the distance between virtual light source and the projection plane is calculated for each pixel of the projection image that is to be pasted onto the object. Akisada must perform the same operation, as seen in figure 8, the “M” symbol is mapped to a spherical object, such that the position of each pixel of the “M” symbol must have been determined based on distances inherently calculated by the process of applying the projection image to the object, for at least the reason that if such an operation was not

performed, the projection image would not appear proper on the object and may look deformed, stretched, or in some way irregular.

Claims 2, 4, & 11: It is known in computer graphics processing that characters, objects, and the like are constructed from a plurality of polygons, thus, the character or object is considered to be a combination of a plurality of parts, where the parts are polygons, or alternatively, pixels (column 24, lines 58-60). Therefore, at least one part, such as a single polygon, is capable of being the designated part as to which the projected image is placed upon. The control unit (figure 1[controller 1]) controls operation of the game machine, system, or program and an attached operation unit (figure 1[display unit 8]) performs the image projection or display process.

Claim 8: Akisada discloses a user can initialize the processes where the user enables a keyboard/mouse attached to the game machine, and the game machine's controller takes care of the actual processes (column 8, lines 27-28).

Claims 9, 10, 13, & 14: Akisada discloses the projection image may be pasted (i.e. texture mapping) such that the transparency is adjusted so as to have the projection image and object image superimposed (figure 8 & column 27, lines 32-43). The settings may be changed based on various conditions including the distance between the positions of the virtual light source, the projection object, and the object.

Claims 15-17: See above explanation of claims 2, 4, 6, & 11, as the same applies for claims 15-17, which depend from claims 8-10, where applicable.

Response to Arguments

Applicant's arguments filed December 6, 2007 have been fully considered but they are not persuasive.

The Applicant's argument merely appears to assert that Akisada discloses the newly added feature because Akisada discloses a different method using texture animation that uses a variety of input texture images to produce a variation in the textures. The Examiner respectfully disagrees as it appears that even a texture animation procedure as disclosed by Akisada appears to include or disclose a pasting process that pastes on the character the projected image such that the projected image projected on a projection plane closest to a viewpoint remains after the character is pasted on all the projected plane on which the projected image is projected by the projected processing using a light matrix, a view matrix, and a projection matrix. Akisada, as shown in at least figure 8, discloses a light matrix (the virtual light source at point P that shines directly at the sphere), a view matrix (the view from point P), and a projection matrix (the plane defined by rectangle HGFE which is where the "M" logo is being projected from) in a broadest reasonable interpretation. Texture mapping is considered to be a "pasting process" itself as it maps an image onto an object in an equivalent fashion as to being "pasted" onto the object. Further, at least figures 11A & 11B appear to disclose that the viewpoint from where the projected image was pasted onto the object remains after the pasting process has occurred. It is clearly seen from these figures that viewing the sphere from two different angles shows the pasted "M" symbol from those angles while the pasted projected image itself has the viewpoint from the projection matrix or projection plane that was used to project the image. Thus, the Examiner submits the language is broad enough to encompass the procedure disclosed by Akisada. For at least these reasons, the rejections of pending claims 1-4 & 7-17 are maintained and updated above to include the newly added language.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milap Shah whose telephone number is (571)272-1723. The examiner can normally be reached on M-F: 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert E Pezzuto/
Supervisory Patent Examiner, Art Unit
3714

/MBS/